

INTERNATIONAL SEARCH REPORT

.....tional Application No
PCT/NL 03/00819

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G02B26/08 H01L41/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G02B H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| X | EP 0 744 641 A (SVG LITHOGRAPHY SYSTEMS INC) 27 November 1996 (1996-11-27) abstract; figures 3-5 | 1,7,8 |
| X | US 5 037 184 A (EALEY MARK A) 6 August 1991 (1991-08-06) the whole document | 1,8 |
| X | US 5 204 784 A (SPINHIRNE JAMES M) 20 April 1993 (1993-04-20) abstract; figures 3-7 | 1,4,7,8 |
| X | WO 01/29586 A (STRAUB PETER) 26 April 2001 (2001-04-26) page 7, line 3 - line 5; figure 3 | 1,7,8 |
| | -/-- | |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

13 July 2004

Date of mailing of the international search report

04. 08. 2004

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A | US 4 143 946 A (LEO BRUNO S ET AL) 13 March 1979 (1979-03-13) the whole document | 1-8 |
| A | US 6 293 680 B1 (BRUNS DONALD G) 25 September 2001 (2001-09-25) the whole document | 1-8 |
| A | US 5 831 780 A (KRIM MICHAEL H) 3 November 1998 (1998-11-03) the whole document | 1-8 |
| X | US 3 459 126 A (NYMAN ALEXANDER) 5 August 1969 (1969-08-05) abstract; figures 1,2,5,6 | 9 |
| A | US 2003/214734 A1 (NISHIOKA KIMIHIKO ET AL) 20 November 2003 (2003-11-20) abstract; figures 12a,12b31-38 | 9,10 |
| X | GB 309 236 A (CHARLES ALGERNON PARSONS; HARRY CASMEY RANDS) 11 April 1929 (1929-04-11) figure 1 | 11 |
| X | US 3 644 022 A (JAGDT REINHARD ET AL) 22 February 1972 (1972-02-22) abstract; figure 1 | 11,12 |
| A | US 3 453 041 A (RANTSCH KURT) 1 July 1969 (1969-07-01) the whole document | 11-13 |

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-8

A deformable membrane mirror

2. claims: 9-10

A magnetic actuator array

3. claims: 11-13

A support construction

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International Application No

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| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|---|----|---------------------|--|--|
| EP 0744641 | A | 27-11-1996 | US 5684566 A CA 2177200 A1 DE 69614918 D1 DE 69614918 T2 EP 0744641 A2 JP 9006011 A | 04-11-1997 25-11-1996 11-10-2001 17-01-2002 27-11-1996 10-01-1997 |
| US 5037184 | A | 06-08-1991 | NONE | |
| US 5204784 | A | 20-04-1993 | NONE | |
| WO 0129586 | A | 26-04-2001 | AT 257946 T AU 7638900 A WO 0129586 A1 DE 50005044 D1 EP 1232406 A1 JP 2003512642 T | 15-01-2004 30-04-2001 26-04-2001 19-02-2004 21-08-2002 02-04-2003 |
| US 4143946 | A | 13-03-1979 | NONE | |
| US 6293680 | B1 | 25-09-2001 | NONE | |
| US 5831780 | A | 03-11-1998 | NONE | |
| US 3459126 | A | 05-08-1969 | DE 1588978 A1 GB 1182663 A | 23-04-1970 04-03-1970 |
| US 2003214734 | A1 | 20-11-2003 | JP 2000267010 A JP 2000298237 A JP 2001201622 A JP 2001208905 A US 2002181126 A1 US 6437925 B1 US 6464363 B1 | 29-09-2000 24-10-2000 27-07-2001 03-08-2001 05-12-2002 20-08-2002 15-10-2002 |
| GB 309236 | A | 11-04-1929 | NONE | |
| US 3644022 | A | 22-02-1972 | CH 506797 A DE 1952584 B FR 2064417 A1 GB 1331285 A JP 50003655 B | 30-04-1971 06-08-1970 23-07-1971 26-09-1973 07-02-1975 |
| US 3453041 | A | 01-07-1969 | DE 1299131 B GB 1160487 A | 10-07-1969 06-08-1969 |